

# PROACT FACT SHEET



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## Construction & Demolition Debris

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The demolition of existing structures and the construction of new ones to meet the needs of an expanding nation generate an enormous amount of debris. In the past waste material produced from the process of construction, renovation, or demolition of structures was landfilled. Landfilling this debris material is both economically and environmentally costly, and with today's technology and environmental awareness, construction and demolition (C&D) debris is easily diverted from landfills through source reduction, recycling, and reuse.

Debris generated at construction and demolition sites vary depending on the structure, which includes residential and nonresidential buildings, as well as roads, runways, and/or bridges. The debris is considered a municipal solid waste, with disposal governed under the Resource Conservation and Recovery Act (RCRA) of 1976. C&D debris is also regulated at the state level; however, state programs vary in regards to what is considered C&D debris and implemented disposal restrictions.

### Debris Composition

The composition of debris varies and is dependent on the project; however, components typically include concrete, asphalt, wood, metals, glass, wallboard, and roofing among other material. In some instances debris from land clearing activities such as stumps, rocks, and dirt may also be classified as C&D debris. In general, construction activities generate "cleaner" material than demolition and renovation activities, which may generate material contaminated with hazardous and/or toxic substances.

C&D debris may be contaminated with substances such as asbestos, lead based paint, polychlorinated biphenyls, mercury, creosote, and other hazardous and/or toxic material. C&D debris contaminated with hazardous and/or toxic material may cause the debris to be handled as a hazardous waste. When possible, these undesirable substances should be removed (abated) prior to any demolition or renovation work.

If the hazardous and/or toxic material is not abated, a determination of the debris waste stream must be made. Either generator (process) knowledge can be applied or the debris must be sampled and tested. Samples should represent the variability of the waste and be tested utilizing the Toxicity Characteristic Leaching Procedure (TCLP), which estimates the leachability of certain hazardous constituents from solid waste. If testing characterizes the debris as hazardous, then the waste must be properly managed and disposed of as mandated under RCRA Subtitle C, Title 42 United States Code § 6921 *et seq.*

### Debris Management

C&D debris consists mostly of inert non-hazardous waste, which can be landfilled with municipal solid waste. However, various management options are available to divert C&D debris from landfills, such as reduction, reuse, and recycling. Landfilling should only be considered as a last option when all other avenues have been exhausted, since processes and markets exist to recover most C&D debris.

Construction and renovation activities can implement source reduction procedures and save resources by selecting environmentally friendly products, utilizing products containing or made from recycled material, reusing excess material on site, and in developing sustainable designs. In addition, demolition activities can remove or dismantle material prior to demolition. This "deconstruction" not only minimizes contamination of debris but also increases the potential value of material diverted for reuse or recycling.

**Lead Based Paint (LPB) Debris**

In 1998, the Environmental Protection Agency (EPA) proposed standards under the Toxics Substances Control Act (TSCA) which would have replaced existing RCRA regulation covering the disposal of lead based paint. These new standards have not been finalized; however, EPA issued a memo-ramdum on 31 July 2000, clarifying “waste generated as part of LBP activities conducted at residences (which include single family homes, apartment buildings, public housing, and military barracks) is also household waste, that such wastes are no longer hazardous wastes and that such wastes thus are excluded from RCRA’s hazardous waste management and disposal regulations.” *Contact PROACT for a copy of this memorandum.*

**Air Force Guidance**

The Air Force entered into a Measure of Merit (MoM) regarding the diversion of non-hazardous solid waste from disposal using landfilling and incineration. The MoM requires the Air Force to report all solid waste disposed or diverted, which includes C&D debris. In addition, Air Force Instruction 32-7080 sets forth reduction standards for diverting municipal solid waste from landfills. This instruction, along with Executive Order 13101, specifies the use of recycled and environmentally preferable products for federal facilities; thereby, mandating the use of source reduction, reuse, and/or recycling prior to sending any solid waste, including C&D debris, to a landfill.

To assist installations in managing C&D debris and capturing diversion data, the Air Force published the “Construction and Demolition Waste Management Guide” and pocket guide. *Contact PROACT to obtain copies of either guide.*

**Additional Information...**

Have a specific question on C&D debris, contact PROACT at DSN 240-4214, or

- ☞ Ms. Karen Kivela, Environmental Quality Directorate, Headquarters Air Force Center for Environmental Excellence (HQ AFCEE/EQ) at DSN 240-4191.
- ☞ Ms. Nancy Carper, HQ AFCEE/EQ, at DSN 240-4964 or [nancy.carper@brooks.af.mil](mailto:nancy.carper@brooks.af.mil).

**Websites**

- ☞ Environmental Quality Directorate, HQ AFCEE, <http://www.afcee.brooks.af.mil/afceehome.asp>
- ☞ Office of Solid Waste, Environmental Protection Agency, <http://www.epa.gov/epaoswer/non-hw/debris/index.htm>
- ☞ Office of Pollution Prevention and Toxics, Environmental Protection Agency, <http://www.epa.gov/opptintr/>

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